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Illinois
Environmental
Protection Agency

Division of Public Water Supplies
2200 Churchill Road
Springfield, Illinois 62706

24534536

Groundwater Quality Protection Program

Park City South MHP
FACILITY NUMBER 1135785
WELL SITE SURVEY
REPORT

Division of Public Water Supplies



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GROUNDWATER QUALITY PROTECTION PROGRAM:

Park City South MHP
FACILITY NUMBER 1135785
WELL SITE SURVEY
REPORT

Prepared by:

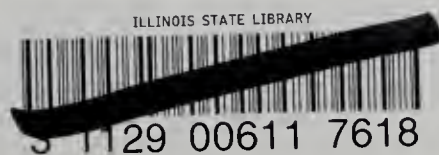
Division of Public Water Supplies

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INTRODUCTION

This report has been prepared by the Agency pursuant to Section 17.1 of the Illinois Environmental Protection Act. The report summarizes information about your facility and samples collected and analyzed from your well(s). The well site survey provides an inventory of the area around the well(s) to help increase your awareness of potential hazards to groundwater utilized by your facility. This information and technical data will assist you in developing and implementing local groundwater protection measures authorized by the Act.

FACILITY DESCRIPTION AND GEOLOGIC PROFILE OF WELL SITES

Park City South MHP obtains its water from four drift wells. These wells provide an average of 37,000 gallons per day to 243 services. See Table I for a description of each well. The surficial geologic susceptibility rating for all four wells is E. The aquifer is overlain by low permeability glacial till. Permeability is a measure of the ability of a soil or sediment to transmit fluids. A complete description and geologic profile is found in the Facility Wells Report (Appendix C).

Table I

	Minimum Setback (ft.)	Maximum Setback (ft.)	Status	Capacity (gpm) (MGD)	Specific Capacity (gpm/ft.)	Treatment	Aquifer	Well Depth (ft.)	Well Logs Available
Well #1 (45098)	200	No	A	20 0.028		Chl., Fl., sftng	Sand and Gravel	89	
Well #2 (45097)	200	No	A	20 0.028		Same	Same	93	
Well #3 (45100)	200	No	A	20 0.028		Same	Same	45	
Well #4 (45099)	200	No	A	20 0.028		Same	Same	92	

A - Active

GROUNDWATER SAMPLING AND MONITORING HISTORY

Park City South MHP Wells #1, #2, #3 and #4 were sampled on October 30, 1987 as part of a Statewide Groundwater Monitoring Program. The samples were analyzed for inorganic chemicals (IOC) and volatile organic/aromatic compounds (VOC/VOA).

VOC/VOA analyses did not detect quantifiable levels of any organic compounds. IOC analyses indicate arsenic levels of 107 parts per billion (ppb) in Well #2. This is above the Maximum Allowable Concentration (MAC) for drinking water, set at 50 ppb, but below the General Use Guideline for raw water of 1,000 ppb. In addition, lead levels of 220 ppb were detected in Well #4. This is above both the MAC and the General Use Guideline of 50 ppb and 100 ppb respectively. Information on arsenic and lead may be found in Appendix E, detailed sampling results are in Appendix D.

WELL SITE SURVEY METHODS AND PROCEDURES

The detailed well site survey consists of an aerial photographic map and inventory sheets (Appendix B), that relate information about potential sources, routes, and possible problem sites to your water supply wells. The location of potential sources, routes, possible problem sites, water wells minimum setback zones and the 1,000 foot survey area are all displayed on the aerial photographic map.

The first page of each survey consists of a summary description and geologic profile for each well. The second and following pages of the survey inventory units within and bordering a 1,000 foot radius of the wellhead. A unit is defined as any device, mechanism, equipment, or area (exclusive of land utilized only for agricultural production). The Agency 5-digit well number is associated with a unit or map code, and then classified. The classification codes relate to definitions of potential contamination sources and routes as defined in the Illinois Groundwater Protection Act (see Groundwater Primer pages 18-19). The distance and direction of the unit from the wellhead is also indicated.

Survey Results and Findings

The Park City South MHP well site survey was conducted on February 21, 1991 by Wade Boring from the Agency's Springfield Office. The following describes the results and findings for the Park City MHP public water wells.

Park City South MHP Well #1 (IEPA #45098)

The survey area is rural. The area is a mixture of row crops, residential and commercial. There are three possible problem sites located within 1,500 feet of well #1. They are Mobil Oil (map code 4) 720 ft NW, TB and J (map code 5) 950 ft NW and American Transportation (map code 6) 1,200 ft NW.

Park City South MHP Well #2 (IEPA #45097)

The survey area is rural. The area is a mixture of row crops, residential and commercial. There are three possible problem sites located within 1,500 feet of Well #2. They are Mobil Oil (map code 4) 920 ft NW, TB and J (map code 5) 1,100 ft NW and American Transportation (map code 6) 1,300 ft NW.

Park City South MHP Well #3 (IEPA #45100)

The survey are is rural. The area is a mixture of row crops, residential and commercial. There is one possible problem site within 1,500 feet of Well #3, Ciba-Geigy (map code 1) 1,400 ft S.

Park City South MHP Well #4 (IEPA #45099)

The survey area is rural. The area is a mixture of row crops, residential and commercial. There is one possible problem site within 1,500 feet of Well #4, Ciba-Geigy (map code 1) 1,400 ft S.

SUMMARY

The well site survey conducted indicates that there are potential sources/sites that could pose a hazard to groundwater utilized by the Park City South MHP public water wells.

- Ciba-Geigy, Mobil Oil, TB and J and American Transportation Co.

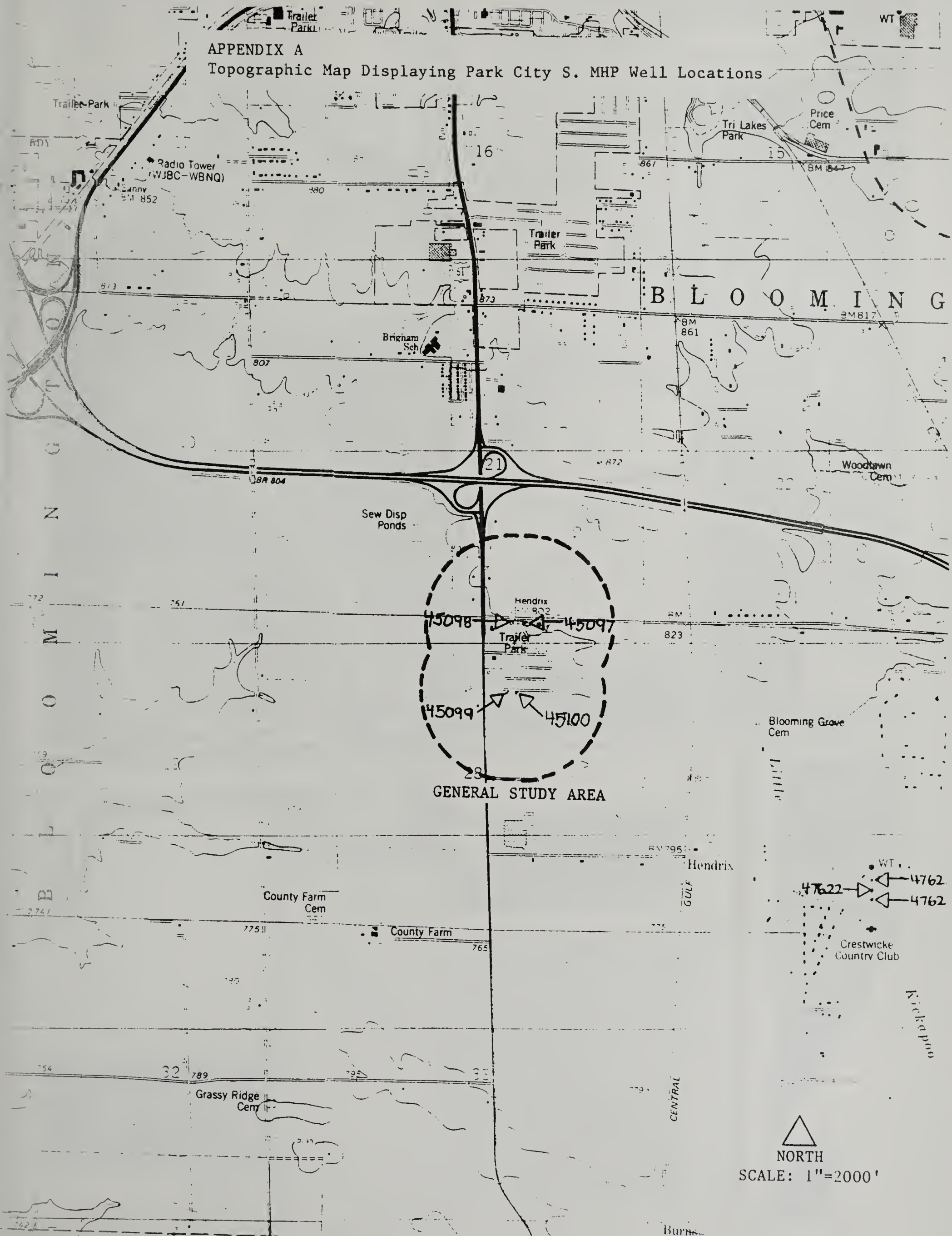
The Illinois Environmental Protection Act provides minimum protection zones for your wells. These minimum protection zones are regulated by the IEPA. The Act also authorizes county and municipal officials the opportunity to provide maximum protection zones up to 1,000 feet. The responsibility for the controls would then be assumed by local officials through adoption of a maximum setback zone ordinance. The county served by the MHP should be contacted in order to make application.

RECOMMENDATIONS

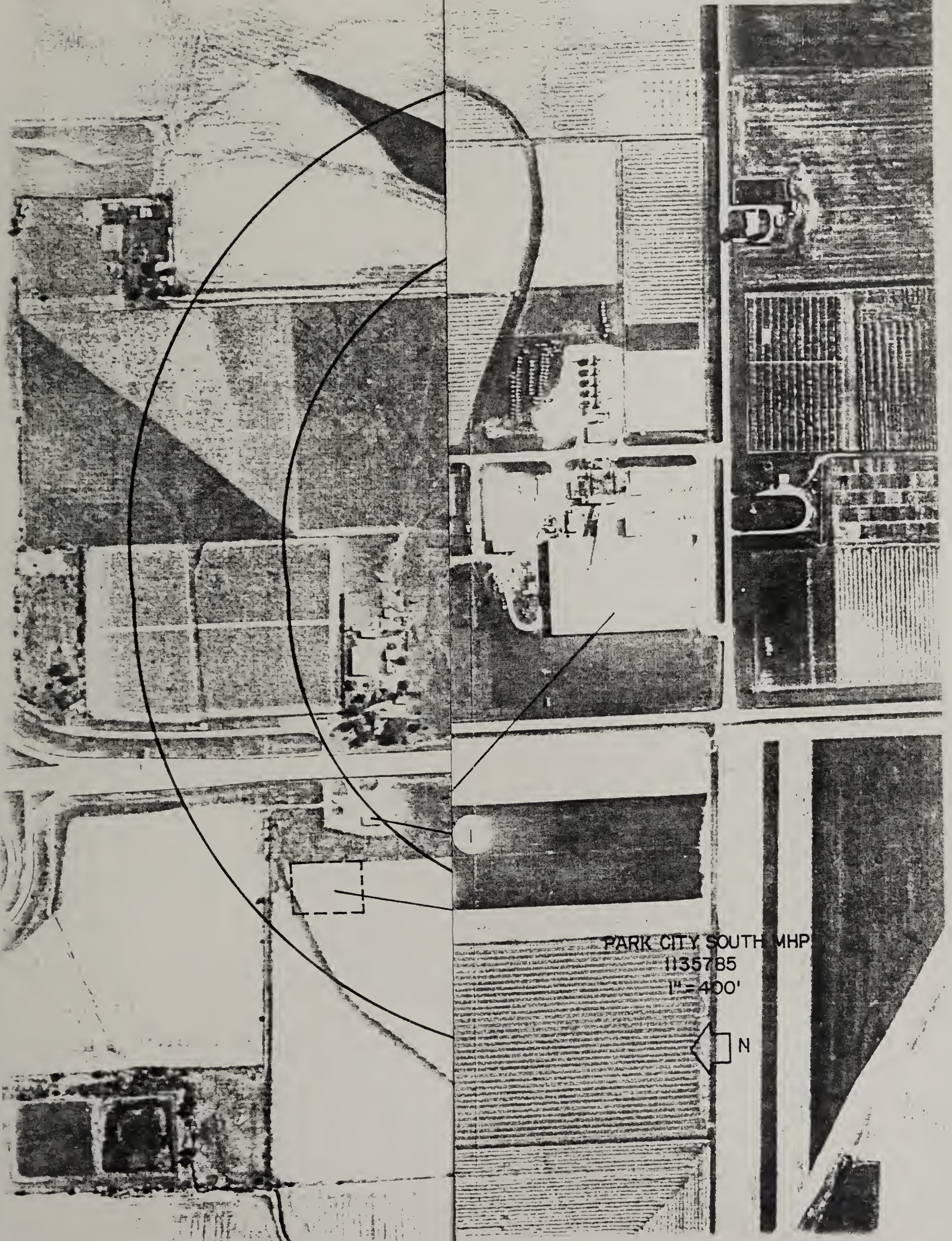
The Agency strongly urges Park City South MHP to consider establishing maximum setback zones for its wells. The Agency has prepared a "Maximum Setback Zone Workbook" which provides detailed case studies of how to establish a maximum setback zone. Technical assistance is available from the Agency and Illinois State Water Survey.

TECHNICAL APPENDICES

Topographic Map Displaying Park City S. MHP Well Locations

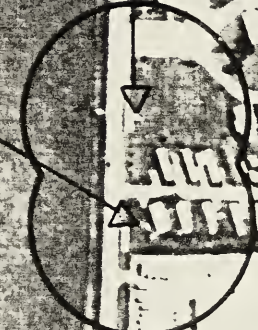


APPENDIX B
Aerial Photographic Map



45098 45097

45099 45100



200'

1000'

1500'

51

1

2

3

4

5

6

PARK CITY SOUTH MHP
1135785
1"=400'

N

APPENDIX: B1 WELL SITE SURVEY SUMMARY DESCRIPTION AND GEOLOGIC PROFILE Park
City South MHP Well #1 (IEPA #45098)

SURVEYOR: W. Boring
SURVEY DATE: 2/21/91

ADDRESS:
Park City South
R.R. #13
Bloomington, IL 61701

AGENCY WELL NO: 45098
WELL NAME & DESC.: Well 1
TREATMENT APPLICATION POINT: 01
FACILITY NO. & NAME: 1135785 - Park City South MHP
FAC. PHONE NUMBER: 23N, 2E, 28, 4H
LOCATION:
TWP, RNG, SECTION, 10 ACRE PLOT:
50S, 2100W
DISTANCE FROM CORNER: 122B - Bloomington East
QUAD SHEET CODE & NAME: 200 ft.
MIN. SETBACK:
MAX. SETBACK:
SURFICIAL GEOLOGIC SUSCEPTIBILITY RATING: E - low permeability silty/clayey
till
AGE OF WELL (DATE WELL CONSTRUCTION):
WELL DEPTH: 89 ft.
AQUIFER CODE: 0101 - sand and gravel aquifer
MULTIPLE AQUIFER (Y, N): No
SUMMARY DESCRIPTION OF 1,000' RADIUS AREA: Survey area is rural. The area is
a mixture of row crops, residential and commercial
INTERVIEW(S) NAME-ADDRESS-AFFILIATION-TELEPHONE NO.:

APPENDIX: B1 INVENTORY AND SYNOPSIS OF UNITS Park City South MHP Well #1
(IEPA #45098)

Classification (CLASSF*) KEY

MIN. ZONE

PP = POTENTIAL PRIMARY
PS = POTENTIAL SECONDARY
RI = POTENTIAL ROUTE
CC = CERTIFIED
XI = UNKNOWN
CU = CLEANUP

OUTSIDE MIN. ZONE

OP = POTENTIAL PRIMARY
OS = POTENTIAL SECONDARY
OR = POTENTIAL ROUTE
CC = CERTIFIED
OX = UNKNOWN
CU = CLEANUP

WELL NO. - MAP CODE - CLASSF*: 45098-01
NAME & ADDRESS OF UNIT OWNER: Ciba-Geigy, R.R. #13, Bloomington, IL 61701
DESCRIPTION AND COMMENTS: seed division
PRE OR POST (Y,N): Y
DISTANCE AND DIRECTION: 2650 ft S

WELL NO. - MAP CODE - CLASSF*: 45098-02
NAME & ADDRESS OF UNIT OWNER: unknown, R.R. #13, Bloomington, IL 61701
DESCRIPTION AND COMMENTS: abandoned building, formerly window and door sales
PRE OR POST (Y,N): Y
DISTANCE AND DIRECTION: 660 ft SW

WELL NO. - MAP CODE - CLASSF*: 45098-03
NAME & ADDRESS OF UNIT OWNER: unknown, R.R. #13, Bloomington, IL 61701
DESCRIPTION AND COMMENTS: abandoned building, formerly RV sales
PRE OR POST (Y,N): Y
DISTANCE AND DIRECTION: 150 ft SW

WELL NO. - MAP CODE - CLASSF*: 45098-04-OS
NAME & ADDRESS OF UNIT OWNER: Mobil Oil, R.R. #13, Bloomington, IL 61701
DESCRIPTION AND COMMENTS: service station w/below ground fuel storage assumed
greater than 500 gallons
PRE OR POST (Y,N): Y
DISTANCE AND DIRECTION: 720 ft NW

WELL NO. - MAP CODE - CLASSF*: 45098-05-0X
NAME & ADDRESS OF UNIT OWNER: TB and J, R.R. #13, Bloomington, IL 61701
DESCRIPTION AND COMMENTS: prefab shed sales, formerly a gas station
PRE OR POST (Y,N): Y
DISTANCE AND DIRECTION: 950 ft NW

WELL NO. - MAP CODE - CLASSF*: 45098-06
NAME & ADDRESS OF UNIT OWNER: American Transportation Co., Bloomington, IL 61701
DESCRIPTION AND COMMENTS: trucking company
PRE OR POST (Y,N): Y
DISTANCE AND DIRECTION: 1200 ft NW

APPENDIX: B2 WELL SITE SURVEY SUMMARY DESCRIPTION AND GEOLOGIC PROFILE Park
City South MHP Well #2 (IEPA #45097)

SURVEYOR: W. Boring
SURVEY DATE: 2/21/91

ADDRESS:
Park City South
R.R. #13
Bloomington, IL 61701

AGENCY WELL NO: 45097
WELL NAME & DESC.: Well 2
TREATMENT APPLICATION POINT: 01
FACILITY NO. & NAME: 1135785 - Park City South MHP
FAC. PHONE NUMBER:

LOCATION:

TWP, RNG, SECTION, 10 ACRE PLOT:

23N, 2E, 28 4H

DISTANCE FROM CORNER: 50S, 1975W

QUAD SHEET CODE & NAME: 122B - Bloomington East

MIN. SETBACK: 200 ft

MAX. SETBACK:

SURFICIAL GEOLOGIC SUSCEPTIBILITY RATING: E - low permeability silty/clayey
till

AGE OF WELL (DATE WELL CONSTRUCTION):

WELL DEPTH: 93 ft

AQUIFER CODE: 0101 - sand and gravel aquifer

MULTIPLE AQUIFER (Y, N): No

SUMMARY DESCRIPTION OF 1,000' RADIUS AREA: Survey area is rural. The area is
a mixture of row crops, residential and commercial

INTERVIEW(S) NAME-ADDRESS-AFFILIATION-TELEPHONE NO.:

APPENDIX: B2 INVENTORY AND SYNOPSIS OF UNITS Park City South MHP Well #2
(IEPA #45097)

Classification (CLASSF*) KEY

MIN. ZONE

PP = POTENTIAL PRIMARY
PS = POTENTIAL SECONDARY
RI = POTENTIAL ROUTE
CC = CERTIFIED
XI = UNKNOWN
CU = CLEANUP

OUTSIDE MIN. ZONE

OP = POTENTIAL PRIMARY
OS = POTENTIAL SECONDARY
OR = POTENTIAL ROUTE
CC = CERTIFIED
OX = UNKNOWN
CU = CLEANUP

WELL NO. - MAP CODE - CLASSF*: 45097-01

NAME & ADDRESS OF UNIT OWNER: Ciba-Geigy, R.R. #13, Bloomington, IL 61701

DESCRIPTION AND COMMENTS: seed division

PRE OR POST (Y,N): Y

DISTANCE AND DIRECTION: 2600 ft S

WELL NO. - MAP CODE - CLASSF*: 45097-02

NAME & ADDRESS OF UNIT OWNER: unknown, R.R. #13, Bloomington, IL 61701

DESCRIPTION AND COMMENTS: abandoned building, formerly window and door sales

PRE OR POST (Y,N): Y

DISTANCE AND DIRECTION: 750 ft S

WELL NO. - MAP CODE - CLASSF*: 45097-03

NAME & ADDRESS OF UNIT OWNER: unknown, R.R. #13, Bloomington, IL 61701

DESCRIPTION AND COMMENTS: abandoned building, formerly RV sales

PRE OR POST (Y,N): Y

DISTANCE AND DIRECTION: 350 ft SW

WELL NO. - MAP CODE - CLASSF*: 45097--04-05

NAME & ADDRESS OF UNIT OWNER: Mobil Oil, R.R. #13, Bloomington, IL 61701

DESCRIPTION AND COMMENTS: service station w/below ground fuel storage assumed greater than 500 gallons

PRE OR POST (Y,N): Y

DISTANCE AND DIRECTION: 920 ft NW

WELL NO. - MAP CODE - CLASSF*: 45097-05
NAME & ADDRESS OF UNIT OWNER: TB and J, R.R. #13, Bloomington, IL 61701
DESCRIPTION AND COMMENTS: prefab shed sales, formerly a gas station
PRE OR POST (Y,N): Y
DISTANCE AND DIRECTION: 1199 ft NW

WELL NO. - MAP CODE - CLASSF*: 45097-06
NAME & ADDRESS OF UNIT OWNER: American Transportation Co., Bloomington, IL
61701
DESCRIPTION AND COMMENTS: trucking company
PRE OR POST (Y,N): Y
DISTANCE AND DIRECTION: 1300 ft NW

APPENDIX: B3 WELL SITE SURVEY SUMMARY DESCRIPTION AND GEOLOGIC PROFILE Park
City South MHP Well #3 (IEPA #45100)

SURVEYOR: W. Boring
SURVEY DATE: 2/21/91

ADDRESS:
Park City South
R.R. #13
Bloomington, IL 61701

AGENCY WELL NO: 45100
WELL NAME & DESC.: Well 3
TREATMENT APPLICATION POINT: 01
FACILITY NO. & NAME: 1135785 - Park City South MHP
FAC. PHONE NUMBER: 23N, 2E, 28, 4G
LOCATION:
TWP, RNG, SECTION, 10 ACRE PLOT:
1250S, . 1950W
DISTANCE FROM CORNER: 122B - Bloomington East
QUAD SHEET CODE & NAME: 200 ft
MIN. SETBACK: 200 ft
MAX. SETBACK:
SURFICIAL GEOLOGIC SUSCEPTIBILITY RATING: E - low permeability silty/clayey
till
AGE OF WELL (DATE WELL CONSTRUCTION):
WELL DEPTH: 45 ft
AQUIFER CODE: 0101 - sand and gravel aquifer
MULTIPLE AQUIFER (Y, N): No
SUMMARY DESCRIPTION OF 1,000' RADIUS AREA: Survey area is rural. The area is
a mixture of row crops, residential and commercial
INTERVIEW(S) NAME-ADDRESS-AFFILIATION-TELEPHONE NO.:

APPENDIX: B3 INVENTORY AND SYNOPSIS OF UNITS Park City South MHP Well #3
(IEPA #45100)

Classification (CLASSF*) KEY

MIN. ZONE

PP = POTENTIAL PRIMARY
PS = POTENTIAL SECONDARY
RI = POTENTIAL ROUTE
CC = CERTIFIED
XI = UNKNOWN
CU = CLEANUP

OUTSIDE MIN. ZONE

OP = POTENTIAL PRIMARY
OS = POTENTIAL SECONDARY
OR = POTENTIAL ROUTE
CC = CERTIFIED
OX = UNKNOWN
CU = CLEANUP

WELL NO. - MAP CODE - CLASSF*: 45100-01

NAME & ADDRESS OF UNIT OWNER: Ciba-Geigy, R.R. #13, Bloomington, IL 61701

DESCRIPTION AND COMMENTS: seed division

PRE OR POST (Y,N): Y

DISTANCE AND DIRECTION: 1400 ft S

WELL NO. - MAP CODE - CLASSF*: 45100-02

NAME & ADDRESS OF UNIT OWNER: unknown, R.R. #13, Bloomington, IL 61701

DESCRIPTION AND COMMENTS: abandoned building, formerly window and door sales

PRE OR POST (Y,N): Y

DISTANCE AND DIRECTION: 600 ft NNW

WELL NO. - MAP CODE - CLASSF*: 45100-03

NAME & ADDRESS OF UNIT OWNER: unknown, R.R. #13, Bloomington, IL 61701

DESCRIPTION AND COMMENTS: abandoned building, formerly RV sales

PRE OR POST (Y,N): Y

DISTANCE AND DIRECTION: 1000 ft N

WELL NO. - MAP CODE - CLASSF*: 45100-04

NAME & ADDRESS OF UNIT OWNER: Mobil Oil, R.R. #13, Bloomington, IL 61701

DESCRIPTION AND COMMENTS: service station w/below ground fuel storage assumed greater than 500 gallons

PRE OR POST (Y,N): Y

DISTANCE AND DIRECTION: 1650 ft NW

WELL NO. - MAP CODE - CLASSF*: 45100-05
NAME & ADDRESS OF UNIT OWNER: TB and J, R.R. #13, Bloomington, IL 61701
DESCRIPTION AND COMMENTS: prefab shed sales, formerly a gas station
PRE OR POST (Y,N): Y
DISTANCE AND DIRECTION: 2050 ft NW

WELL NO. - MAP CODE - CLASSF*: 45100-06
NAME & ADDRESS OF UNIT OWNER: American Transportation Co., Bloomington, IL 61701
DESCRIPTION AND COMMENTS: trucking company
PRE OR POST (Y,N): Y
DISTANCE AND DIRECTION: 2200 ft NW

APPENDIX: B4 WELL SITE SURVEY SUMMARY DESCRIPTION AND GEOLOGIC PROFILE Park
City South MHP Well #4 (IEPA #45099)

SURVEYOR: W. Boring
SURVEY DATE: 2/21/91

ADDRESS:
Park City South
R.R. #13
Bloomington, IL 61701

AGENCY WELL NO: 45099
WELL NAME & DESC.: Well 4
TREATMENT APPLICATION POINT: 01
FACILITY NO. & NAME: 1135785 - Park City South MHP
FAC. PHONE NUMBER:

LOCATION:
TWP, RNG, SECTION, 10 ACRE PLOT: 23N, 2E, 28, 4G

DISTANCE FROM CORNER: 1250S, 2125W
QUAD SHEET CODE & NAME: 122B - Bloomington East
MIN. SETBACK: 200 ft.
MAX. SETBACK:

SURFICIAL GEOLOGIC SUSCEPTIBILITY RATING: E - low permeability silty/clayey
till

AGE OF WELL (DATE WELL CONSTRUCTION):

WELL DEPTH: 92 ft

AQUIFER CODE: 0101 - sand and gravel aquifer

MULTIPLE AQUIFER (Y, N): No

SUMMARY DESCRIPTION OF 1,000' RADIUS AREA: Survey area is rural. The area is
a mixture of row crops, residential and commercial

INTERVIEW(S) NAME-ADDRESS-AFFILIATION-TELEPHONE NO.:

APPENDIX: B4 INVENTORY AND SYNOPSIS OF UNITS Park City South MHP Well #4
(IEPA #45099)

Classification (CLASSF*) KEY

MIN. ZONE

PP = POTENTIAL PRIMARY
PS = POTENTIAL SECONDARY
RI = POTENTIAL ROUTE
CC = CERTIFIED
XI = UNKNOWN
CU = CLEANUP

OUTSIDE MIN. ZONE

OP = POTENTIAL PRIMARY
OS = POTENTIAL SECONDARY
OR = POTENTIAL ROUTE
CC = CERTIFIED
OX = UNKNOWN
CU = CLEANUP

WELL NO. - MAP CODE - CLASSF*: 45099-01
NAME & ADDRESS OF UNIT OWNER: Ciba-Geiby, R.R. #13, Bloomington, IL 61701
DESCRIPTION AND COMMENTS: seed division
PRE OR POST (Y,N): Y
DISTANCE AND DIRECTION: 1400 ft S

WELL NO. - MAP CODE - CLASSF*: 45099-02
NAME & ADDRESS OF UNIT OWNER: unknown, R.R. #13, Bloomington, IL 61701
DESCRIPTION AND COMMENTS: abandoned building, formerly window and door sales
PRE OR POST (Y,N): Y
DISTANCE AND DIRECTION: 610 ft NW

WELL NO. - MAP CODE - CLASSF*: 45099-03
NAME & ADDRESS OF UNIT OWNER: unknown, R.R. #13, Bloomington, IL 61701
DESCRIPTION AND COMMENTS: abandoned building, formerly RV sales
PRE OR POST (Y,N): Y
DISTANCE AND DIRECTION: 1000 ft N

WELL NO. - MAP CODE - CLASSF*: 45099-04
NAME & ADDRESS OF UNIT OWNER: Mobil Oil, R.R. #13, Bloomington, IL 61701
DESCRIPTION AND COMMENTS: service station w/below ground fuel storage assumed
greater than 500 gallons
PRE OR POST (Y,N): Y
DISTANCE AND DIRECTION: 1700 ft NW

WELL NO. - MAP CODE - CLASSF*: 45099-05

NAME & ADDRESS OF UNIT OWNER: TB and J, R.R. #13, Bloomington, IL 61701

DESCRIPTION AND COMMENTS: prefab shed sales, formerly a gas station

PRE OR POST (Y,N): Y

DISTANCE AND DIRECTION: 2100 ft NW

WELL NO. - MAP CODE - CLASSF*: 45099-06

NAME & ADDRESS OF UNIT OWNER: American Transportation Co., Bloomington, IL 61701

DESCRIPTION AND COMMENTS: trucking company

PRE OR POST (Y,N): Y

DISTANCE AND DIRECTION: 2200 ft NW

WB:ds:0080M/1-17,sp

APPENDIX C

REPORT: P6000053
MODULE: P6000027

FACILITY: 1135785 PARK CITY SOUTH MHP

----- OFFICIAL CUSTODIAN -----

----- OWNER -----

PERMIT NAME

92 #13

BOX 711

ALCONINGTON

IL 61701

WELL: 45097 WELL#2, NE, IN LOT 35
LATITUDE: N40 25 46.0

SUSCEPTIBILITY - LAND BURIAL: E
AQUIFERS: QUATERNARY SYSTEM

WELL: 45098 WELL#1, NW IN LOT 12
LATITUDE: N40 25 46.0

SUSCEPTIBILITY - LAND BURIAL: E
AQUIFERS: QUATERNARY SYSTEM

WELL: 45099 WELL#4, SE, IN LOT 214
LATITUDE: N40 25 34.0

SUSCEPTIBILITY - LAND BURIAL: E

WELL: 45100 WELL #3, SW, IN LOT 210
LATITUDE: N40 25 34.0

SUSCEPTIBILITY - LAND BURIAL: E

STATUS: ACTIVE
LONGITUDE: 4088 59 15.0
DEPTH(FT): 93
TWP: 23N RNG: 02E SEC: 28 PLOT: 48

SUSCEPTIBILITY - LAND SPREADING: D2 --- MINIMUM SETBACK(FT): 0200 ---

STATUS: ACTIVE
LONGITUDE: 4088 59 17.0
DEPTH(FT): 89
TWP: 23N RNG: 02E SEC: 28 PLOT: 48

SUSCEPTIBILITY - LAND SPREADING: D2 --- MINIMUM SETBACK(FT): 0200 ---

STATUS: ACTIVE
LONGITUDE: 4088 59 13.0
DEPTH(FT): 92
TWP: 23N RNG: 02E SEC: 28 PLOT: 46

SUSCEPTIBILITY - LAND SPREADING: D2 --- MINIMUM SETBACK(FT): 0200 ---

STATUS: ACTIVE
LONGITUDE: 4088 59 17.0
DEPTH(FT): 45
TWP: 23N RNG: 02E SEC: 28 PLOT: 46

SUSCEPTIBILITY - LAND SPREADING: D2 --- MINIMUM SETBACK(FT): 0200 ---

SUSCEPTIBILITY CODES

LAND BURIAL: E = UNIFORM, RELATIVELY IMPERMEABLE SILTY OR CLAYEY TILL AT LEAST 50 FT THICK; NO EVIDENCE OF INTERBEDDED SAND AND GRAVEL.

LAND SPREADING: D2 = UNIFORM, RELATIVELY IMPERMEABLE SILTY OR CLAYEY TILL AT LEAST 20 FT THICK; NO EVIDENCE OF INTERBEDDED SAND AND GRAVEL.

APPENDIX D

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF PUBLIC WATER SUPPLIES
SELECTED SAMPLE EXPANDED REPORT

PAGE: 54
DATE: 03/07/91

REPORT: DWLW0345
MODULE: DWGMM020

FACILITY: 1135785 PARK CITY SOUTH MHP
TAP: 01 IN THE PARK OFFICE BLDG
RAW SRCE: 45097 WELL#2, NE. IN LOT 35
STATUS: A PUBLIC: Y CORR: Y TYPE WATER: G
SAMPLE NO: 87177430 LOCATION: PARK CITY SOUTH MHP WELL 2
SMFL TYPE: RAW COLLECTOR: W. McMILLAN
SMPL PURP: 5-SPEC/OTHS COMMENTS:
SMPL PRG: I-GMM INORG OBSRVATNS:

COLL DATE: 10/30/87 DELIVERED BY: UPS
LAB RCVD: 11/04/87 RECEIVED BY: PHD
LAB COMPL: 01/25/88 LAB SUPERVISOR: RPF
SMPL PERIOD: 10/87 FUND CODE: PW30

ANALYSIS			STANDARD			TRIGGER		
ID	NO	NO	DESCRIPTION	UNITS	RESULT	ORINK WTR	RAW WTR	LEVEL
102T000	001	70300	RESIDUE, TOTAL FILTERABLE	MG/L	436.000			
103T000	001	00410	ALKALINITY, TOTAL MG/L AS	MG/L	457.000			
107T000	001	00951	FLUORIDE, TOTAL MG/L AS F	MG/L	0.540	4.000		
108T000	001	00940	CHLORIDE, TOTAL MG/L AS CL	MG/L	3.600			
109T000	001	00945	SULFATE, TOTAL MG/L AS SO4	MG/L	10.000 <			
110T000	001	00630	NITRATE & NITRITE TOTAL MG/L AS N	MG/L	0.100 <	10.000		
111T000	001	00610	NITROGEN, AMMONIA TOTAL MG/L AS N	MG/L	4.200			
112T000	001	32730	PHENOLS, TOTAL RECOVERABLE	UG/L	5.000 <			
114T000	001	00956	SILICA, TOTAL MG/L AS P	MG/L	14.600			
115T000	001	00665	PHOSPHORUS, TOTAL MG/L AS P	MG/L	0.210			
116T000	001	00720	CYANIDE, TOTAL MG/L AS CN	MG/L	0.005 <	0.200		
144T000	001	01002	ARSENIC, TOTAL RECOVERABLE	UG/L AS AS	107.000	50.000*		
151T000	001	01051	LEAD, TOTAL RECOVERABLE	UG/L AS Pb	45.000	50.000		
153T000	001	71900	MERCURY, TOTAL UG/L AS Hg	UG/L	0.050 <	2.000		
155T000	001	01147	SELENIUM, TOTAL RECOVERABLE	UG/L AS SE	1.000 <	10.000		
177T100	001	00916	CALCIUM, TOTAL RECOVERABLE	MG/L AS CA ANAL BY ICP	65.000			
177T100	002	00927	MAGNESIUM, TOTAL RECOVERABLE	MG/L AS CA ANAL BY ICP	42.000			
177T100	003	00929	SODIUM, TOTAL RECOVERABLE	MG/L AS NA ANAL BY ICP	41.000			
177T100	004	00937	POTASSIUM, TOTAL RECOVERABLE	MG/L AS K ANAL BY ICP	1.200			
177T100	005	01105	ALUMINUM, TOTAL RECOVERABLE	UG/L AS AL ANAL BY ICP	50.000 <			
177T100	006	01007	BARIUM, TOTAL RECOVERABLE	UG/L AS BA ANAL BY ICP	161.000	1000.000		
177T100	007	01022	BORON, TOTAL RECOVERABLE	UG/L AS B ANAL BY ICP	398.000			
177T100	008	01012	BERYLLIUM, TOTAL RECOVERABLE	UG/L AS BE ANAL BY ICP	0.500 <			
177T100	009	01027	CADMIUM, TOTAL RECOVERABLE	UG/L AS CD ANAL BY ICP	3.000 <	10.000		
177T100	010	01034	CHROMIUM, TOTAL RECOVERABLE	UG/L AS CR ANAL BY ICP	5.000 <	50.000		
177T100	011	01042	COPPER, TOTAL RECOVERABLE	UG/L AS CU ANAL BY ICP	819.000	5000.000		
177T100	012	01037	COPPER, TOTAL RECOVERABLE	UG/L AS CO ANAL BY ICP	5.000 <			
177T100	013	01045	IRON, TOTAL RECOVERABLE	UG/L AS FE ANAL BY ICP	2709.000	1000.000*		
177T100	014	01055	MANGANESE, TOTAL RECOVERABLE	UG/L AS MN ANAL BY ICP	13.000	150.000		
177T100	015	01067	NICKEL, TOTAL RECOVERABLE	UG/L AS NI ANAL BY ICP	9.000			
177T100	016	01077	SILVER, TOTAL RECOVERABLE	UG/L AS AG ANAL BY ICP	3.000 <	50.000		
177T100	017	01082	STRONTIUM, TOTAL RECOVERABLE	UG/L AS SR ANAL BY ICP	1056.000			
177T100	018	01087	VANADIUM, TOTAL RECOVERABLE	UG/L AS V ANAL BY ICP	5.000 <			
177T100	019	01092	ZINC, TOTAL RECOVERABLE	UG/L AS ZN ANAL BY ICP	616.000	5000.000		
177T100	020	82396	HARDNESS, CALC - MG/L	MG/L	333.000			
5001200	001	72037	PUMPING RATE GPM	GAL/M	35.000			
5001200	004	00400	PH PH UNITS	UNITS	6.980			
5001200	005	00013	WATER TEMPERATURE DEG C	DEG C	14.600			

SAMPLE NO: 076057100 LOCATION: PARK CITY SOUTH MHP WELL 278 BLOOMINGTON EAST
COLL DATE: 10/30/87 DELIVERED BY: AMEL

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF PUBLIC WATER SUPPLIES
SELECTED SAMPLE EXPANDED REPORT

PAGE: 55
DATE: 03/07/91

REPORT: 04000004
DOULE: F0000026

*** CONTINUED ***

FACILITY: 1135785 PARK CITY SOUTH MHP

SMPL TYPE: RAW
SMPL PURP: 5-SPEC/JTHP
SMPL PRPG: V-VOC

LAB RCVD: 11/04/87
LAB COMPL: 12/30/87
SMPL PERIOD: 10/87

RECEIVED BY: D V
LAB SUPERVISOR: JTH
FUND CODE: PW30

ANALYSIS RSLT NO NO DESCRIPTION

UNITS RESULT DRINK WTR RAW WTR TRIGGER LEVEL

431A 00 001	32106	CHLOROFORM UG/L GC/MS	UG/L	1.000	<
431A 00 002	32101	BROMODICHLOROMETHANE UG/L GC/MS	UG/L	1.000	<
431A 00 003	32105	DIBROMOCHLOROMETHANE UG/L GC/MS	UG/L	1.000	<
431A 00 004	32104	BROMOFORM UG/L GC/MS	UG/L	1.000	<
431A 00 005	34423	METHYLENE CHLORIDE UG/L	UG/L	1.000	<
431A 00 006	34501	1,1-DICHLOROETHYLENE UG/L GC/MS	UG/L	1.000	<
431A 00 007	34496	1,1-DICHLOROETHANE UG/L GC/MS	UG/L	1.000	<
431A 00 008	34546	TRANS-1,2-DICHLOROETHYLENE UG/L GC/MS	UG/L	1.000	<
431A 00 009	77279	1,2-DICHLOROETHANE UG/L	UG/L	1.000	<
431A 00 010	34506	1,1,1-TRICHLOROETHANE UG/L GC/MS	UG/L	1.000	<
431A 00 011	32102	CARBON TETRACHLORIDE UG/L GC/MS	UG/L	1.000	<
431A 00 012	39180	TRICHLOROETHYLENE UG/L	UG/L	1.000	<
431A 00 013	24475	TETRACHLOROETHYLENE UG/L GC/MS	UG/L	1.000	<
431A 00 014	34301	CHLOROBENZENE UG/L	UG/L	1.000	<
431A 00 015	34716	DICHLOROBENZENE UG/L	UG/L	1.000	<
431A 00 016	78124	BENZENE UG/L	UG/L	1.000	<
431A 00 017	78131	TOLUENE UG/L	UG/L	1.000	<
431A 00 018	78113	ETHYLBENZENE UG/L	UG/L	1.000	<
431A 00 019	81551	XYLENE UG/L	UG/L	1.000	<
5001200 001	72037	PUMPING RATE GPM	GAL/M	35.000	
5001200 004	00400	PH PH UNITS	UNITS	6.980	
5001200 005	00010	WATER TEMPERATURE DEG C	DEG-C	14.600	

FACILITY: 1135785 PARK CITY SOUTH MHP
TAP: 01 IN THE PARK OFFICE BLDG
RAW SRCE: 45098 WELL#1, NW IN LOT 12

STATUS: A
STATUS: A
STATUS: A

TYPE WATER: G

SAMPLE NO: 871775300
SMPL TYPE: RAW
SMPL PURP: 5-SPEC/JTHP
SMPL PRPG: I-GWH INORG OBSRVATNS:

COLL DATE: 10/30/87
LAB RCVD: 11/04/87
LAB COMPL: 01/25/88
SMPL PERIOD: 10/87

DELIVERED BY: UPS
RECEIVED BY: PMD
LAB SUPERVISOR: RPF
FUND CODE: PW30

ANALYSIS RSLT NO NO DESCRIPTION

UNITS RESULT DRINK WTR RAW WTR TRIGGER LEVEL

1021000 001	70300	RESIDUE, TOTAL FILTERABLE 3180 C, MG/L	MG/L	460.000	
1021000 001	00410	ALKALINITY, TOTAL MG/L AS CaCO3	MG/L	437.000	
1071000 001	00951	FLUORIDE, TOTAL MG/L AS F	MG/L	0.320	
1081000 001	00940	CHLORIDE, TOTAL MG/L AS CL	MG/L	28.000	
1091000 001	00945	SULFATE, TOTAL MG/L AS SO4	MG/L	15.000	
1101000 001	00630	NITRATE & NITRITE TOTAL MG/L AS N	MG/L	0.100	<
1111000 001	00610	NITROGEN, AMMONIA TOTAL MG/L AS N	MG/L	1.400	
1121000 001	32730	PHENOLS, TOTAL RECOVERABLE UG/L	UG/L	5.000	<

FACILITY: 1135795 PARK CITY SOUTH MHP										*** CONTINUED ***									
1141000	001	00956	SILICA, TOTAL	MG/L AS SI02		MG/L	15.000												
1151000	001	00665	PHOSPHORUS, TOTAL	MG/L AS P		MG/L	0.130												
1161000	001	00720	CYANIDE, TOTAL	MG/L AS CN		MG/L	0.005	<	0.200										
1441000	001	01002	ARSENIC, TOTAL	RECOVERABLE UG/L AS AS		UG/L	5.000		50.000										
1511100	001	01051	LEAD, TOTAL	RECOVERABLE UG/L AS PB		UG/L	5.000	<	50.000										
1531000	001	71900	MERCURY, TOTAL	UG/L AS HG		UG/L	0.050	<	2.000										
1551000	001	01147	SELENIUM, TOTAL	RECOVERABLE UG/L AS SE		UG/L	1.000	<	10.000										
1771100	001	00916	CALCIUM, TOTAL	RECOVERABLE MG/L AS CA ANAL BY ICP		MG/L	93.000												
1771100	002	00927	MAGNESIUM, TOTAL	RECOVERABLE MG/L AS CA ANAL BY ICP		MG/L	48.000												
1771100	003	00929	SODIUM, TOTAL	RECOVERABLE MG/L AS NA ANAL BY ICP		MG/L	16.000												
1771100	004	00937	POTASSIUM, TOTAL	RECOVERABLE MG/L AS K ANAL BY ICP		MG/L	0.980												
1771100	005	01105	ALUMINUM, TOTAL	RECOVERABLE UG/L AS AL ANAL BY ICP		UG/L	50.000	<											
1771100	006	01007	BARIUM, TOTAL	RECOVERABLE UG/L AS BA ANAL BY ICP		UG/L	163.000		1000.000										
1771100	007	01022	BORON, TOTAL	RECOVERABLE UG/L AS B ANAL BY ICP		UG/L	121.000												
1771100	008	01012	BERYLLIUM, TOTAL	RECOVERABLE UG/L AS BE ANAL BY ICP		UG/L	1.000	<											
1771100	009	01027	CADMIUM, TOTAL	RECOVERABLE UG/L AS CD ANAL BY ICP		UG/L	3.000	<	10.000										
1771100	010	01034	CHROMIUM, TOTAL	RECOVERABLE UG/L AS CR ANAL BY ICP		UG/L	5.000	<	50.000										
1771100	011	01042	COPPER, TOTAL	RECOVERABLE UG/L AS CU ANAL BY ICP		UG/L	84.000		5000.000										
1771100	012	01037	COBALT, TOTAL	RECOVERABLE UG/L AS CO ANAL BY ICP		UG/L	5.000	<											
1771100	013	01045	IRON, TOTAL	RECOVERABLE, UG/L AS FE ANAL BY ICP		UG/L	1924.000		1000.000*										
1771100	014	01055	MANGANESE, TOTAL	RECOVERABLE UG/L AS MN ANAL BY ICP		UG/L	53.000		150.000										
1771100	015	01067	NICKEL, TOTAL	RECOVERABLE UG/L AS NI ANAL BY ICP		UG/L	5.000	<											
1771100	016	01077	SILVER, TOTAL	RECOVERABLE UG/L AS AG ANAL BY ICP		UG/L	3.000	<	50.000										
1771100	017	01082	STRONTIUM, TOTAL	RECOVERABLE UG/L AS SR ANAL BY ICP		UG/L	1462.000												
1771100	018	01087	VANADIUM, TOTAL	RECOVERABLE UG/L AS V ANAL BY ICP		UG/L	5.000	<											
1771100	019	01092	ZINC, TOTAL	RECOVERABLE UG/L AS ZN ANAL BY ICP		UG/L	100.000	<	5000.000										
1771100	020	82394	HARDNESS, CALC	- MG/L		MG/L	431.000												
5001200	001	72037	PUMPING RATE	GPM		GAL/M	35.000												
5001200	004	00400	PH	PH UNITS		UNITS	7.030												
5001200	005	00010	WATER TEMPERATURE	DEG C		DEG.C	14.500												
SAMPLE NO: 076257000										COLL DATE: 10/30/87									
SMPL TYPE: RAW										LAB RCVD: 11/04/87									
SMPL PURP: 5-SPEC/OTHR										LAB COMPL: 12/30/87									
SMPL PRG: V-VOC										SMPL PERIOD: 10/87									
										FUND CODE: PW30									
										DELIVERED BY: MAIL									
										RECEIVED BY: D V									
										LAB SUPERVISOR: JTH									
ANALYSIS										STANDARDS									
ID	NO	NO	DESCRIPTION							UNITS	RESULT	DRINK MTR	RAW MTR	TRIGGER					
431A 00	001	32106	CHLOROFORM UG/L GC/MS							UG/L	1.000	<							
431A 00	002	32101	BROMODICHLOROMETHANE UG/L GC/MS							UG/L	1.000	<							
431A 00	003	32105	DIBROMODICHLOROMETHANE UG/L GC/MS							UG/L	1.000	<							
431A 00	004	32104	BROMOFORM UG/L GC/MS							UG/L	1.000	<							
431A 00	005	34423	METHYLENE CHLORIDE UG/L							UG/L	1.000	<							
431A 00	006	34501	1,1-DICHLOROTETRAETHYLENE UG/L GC/MS							UG/L	1.000	<							
431A 00	007	34496	1,1-DICHLOROETHANE UG/L GC/MS							UG/L	1.000	<							
431A 00	008	34546	1,2-DICHLOROETHYLENE UG/L GC/MS							UG/L	1.000	<							
431A 00	009	77279	1,2-DICHLOROETHANE UG/L							UG/L	1.000	<							
431A 00	010	34506	1,1,1-TRICHLOROETHANE UG/L GC/MS							UG/L	1.000	<							
431A 00	011	32102	CAPSON TETRACHLORIDE UG/L GC/MS							UG/L	1.000	<							

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF PUBLIC WATER SUPPLIES
SELECTED SAMPLE EXPANDED REPORT

REPORT: 1135785
MODULE: PWGMA026

FACILITY: 1135785 PARK CITY SOUTH MHP		** CONTINUED **	
431A 00 012 39130	TRICHLOROETHYLENE UG/L	UG/L	1.000 <
431A 00 013 34475	TETRACHLOROETHYLENE UG/L	UG/L	1.000 <
431A 00 014 34301	CHLOROBENZENE UG/L	UG/L	1.000 <
431A 00 015 34715	DICHLOROBENZENE UG/L	UG/L	1.000 <
431A 00 016 78124	BENZENE UG/L	UG/L	1.000 <
431A 00 017 78131	TOLUENE UG/L	UG/L	1.000 <
431A 00 018 79113	ETHYLENE UG/L	UG/L	1.000 <
431A 00 019 81551	XYLENE UG/L	UG/L	1.000 <
5001200 001 72037	PUMPING RATE GPM	GAL/M	35.000
5001200 004 00400	PH PH UNITS	UNITS	7.030
5001200 005 00010	WATER TEMPERATURE DEG C	DEG.C	14.500
FACILITY: 1135785 PARK CITY SOUTH MHP		STATUS: A PUBLIC: Y COMM: Y TYPE WATER: G	
TAP: 01 IN THE PARK OFFICE RLDG		STATUS: A	
RAW SPC: 45099 WELL#4, SE, IN LOT 214		STATUS: A	
SAMPLE NO: R71775200	LOCATION: PARK CITY SOUTH MHP WELL 4	COLL DATE: 10/30/87 DELIVERED BY: UPS	
SAMPLE TYPE: RAW	COLLECTOR: W. MCWILLAN	LAB RCVD: 11/04/87 RECEIVED BY: PMD	
SAMPLE PURP: 5-SPEC/UTHR	COMMENTS:	LAB COMPL: 01/25/88 LAB SUPERVISOR: RPF	
SAMPLE PROB: I-GYM INORG OBSRVATNS:		SMPL PERIOD: 10/87 FUNO CODE: PW30	

ANALYSIS		STORYET		STANDARDS		TRIGGER	
ID	NO	NO	DESCRIPTION	UNITS	RESULT	DRINK WTR	RAW WTR
1021000	001	70300	RESIDUE, TOTAL FILTERABLE	MG/L	451.000		
1021000	001	00410	ALKALINITY, TOTAL	MG/L	442.000		
1021000	001	00951	FLUORIDE, TOTAL	MG/L	0.390	4.000	
1021000	001	00940	CHLORIDE, TOTAL	MG/L	18.000		
1021000	001	00945	SULFATE, TOTAL	MG/L	12.000		
1021000	001	00630	NITRATE & NITRITE, TOTAL	MG/L	0.100 <	10.000	
1021000	001	00610	NITROGEN, AMMONIA, TOTAL	MG/L	2.100		
1021000	001	32730	PHENOLS, TOTAL RECOVERABLE	UG/L	5.000 <		
1021000	001	00356	SILICA, TOTAL	MG/L	15.000		
1021000	001	00665	PHOSPHORUS, TOTAL	MG/L	0.180		
1021000	001	00720	CYANIDE, TOTAL	MG/L	0.005 <	0.200	
1021000	001	01002	ARSENIC, TOTAL RECOVERABLE	UG/L	24.000	50.000	
1021000	001	01051	LEAD, TOTAL RECOVERABLE	UG/L	220.000	50.000*	
1021000	001	71900	MERCURY, TOTAL	UG/L	0.050 <	2.000	
1021000	001	01147	SELENIUM, TOTAL RECOVERABLE	UG/L	1.000 <	10.000	
1021000	001	00916	CALCIUM, TOTAL RECOVERABLE	MG/L	84.000		
1021000	002	00927	MAGNESIUM, TOTAL RECOVERABLE	MG/L	46.000		
1021000	003	00929	SODIUM, TOTAL RECOVERABLE	MG/L	27.000		
1021000	004	00937	POTASSIUM, TOTAL RECOVERABLE	MG/L	1.100		
1021000	005	01105	ALUMINUM, TOTAL RECOVERABLE	UG/L	50.000 <		
1021000	006	01007	GARIUM, TOTAL RECOVERABLE	UG/L	161.000	1000.000	
1021000	007	01022	BORON, TOTAL RECOVERABLE	UG/L	203.000		
1021000	008	01012	REBYLLIUM, TOTAL RECOVERABLE	UG/L	1.000 <		
1021000	009	01027	CADMIUM, TOTAL RECOVERABLE	UG/L	3.000 <	10.000	
1021000	010	01034	CHROMIUM, TOTAL RECOVERABLE	UG/L	5.000 <	50.000	
1021000	011	01022	COPPER, TOTAL RECOVERABLE	UG/L	2690.000	5000.000	

REPORT: 041W0044
MODULE: PWGMM026

FACILITY: 1135785 PARK CITY SOUTH MHP										*** CONTINUED ***									
177T100	012	01037	COBALT, TOTAL RECOVERABLE	UG/L AS CO ANAL BY ICP	UG/L	5.000	<			177T100	013	01045	IRON, TOTAL RECOVERABLE	UG/L AS FE ANAL BY ICP	UG/L	1953.000	1000.000*		
177T100	013	01045	IRON, TOTAL RECOVERABLE	UG/L AS FE ANAL BY ICP	UG/L	41.000	<			177T100	014	01055	MANGANESE, TOTAL RECOVERABLE	UG/L AS MN ANAL BY ICP	UG/L	135.000	150.000		
177T100	014	01055	MANGANESE, TOTAL RECOVERABLE	UG/L AS NI ANAL BY ICP	UG/L	3.000	<			177T100	015	01067	NICKEL, TOTAL RECOVERABLE	UG/L AS AG ANAL BY ICP	UG/L	1333.000	50.000		
177T100	015	01067	NICKEL, TOTAL RECOVERABLE	UG/L AS SR ANAL BY ICP	UG/L	5.000	<			177T100	016	01077	SILVER, TOTAL RECOVERABLE	UG/L AS ZN ANAL BY ICP	UG/L	4413.000	5000.000		
177T100	016	01077	SILVER, TOTAL RECOVERABLE	UG/L AS V ANAL BY ICP	UG/L	400.000	<			177T100	017	01082	STRONTIUM, TOTAL RECOVERABLE	UG/L AS V ANAL BY ICP	MG/L	50.000			
177T100	017	01082	STRONTIUM, TOTAL RECOVERABLE	UG/L AS V ANAL BY ICP	MG/L	50.000	<			177T100	018	01087	VANADIUM, TOTAL RECOVERABLE	UG/L AS V ANAL BY ICP	GAL/M	6.800			
177T100	018	01087	VANADIUM, TOTAL RECOVERABLE	UG/L AS V ANAL BY ICP	UNITS	14.400	<			177T100	019	01092	ZINC, TOTAL RECOVERABLE	UG/L AS V ANAL BY ICP	DEG.C				
177T100	019	01092	ZINC, TOTAL RECOVERABLE	UG/L AS V ANAL BY ICP	DEG.C		<			177T100	020	82394	HARDNESS, CALC	MG/L					
177T100	020	82394	HARDNESS, CALC	MG/L						5001200	001	72037	PUMPING RATE	GPM					
5001200	004	00430	PH	PH UNITS						5001200	004	00430	PH	PH UNITS					
5001200	005	00010	WATER TEMPERATURE	DEG.C						5001200	005	00010	WATER TEMPERATURE	DEG.C					
SAMPLE NO: D76057300 LOCATION: PARK CITY										MHP/WELL 4/BLOOMINGTON EAST									
SMEL TYPE: RAW COLLECTOR: MC MILLAN										LAB RCVD: 11/04/87 RECEIVED BY: D V									
SMPL PURP: 5-SPEC/OTHR COMMENTS: VDC'S										LAB COMPL: 12/30/87 LAB SUPERVISOR: JIH									
SMPL PROG: V-VDC DBSRVATNS: 2 VDC										SMPL PERIOD: 10/87 FUND CODE: PW30									
ANALYSIS RSLT NO NO NO DESCRIPTION										-----STANDARDS----- TRIGGER									
431A 00	001	32105	CHLOROFORM	UG/L GC/MS	UG/L	1.000	<			431A 00	001	32105	CHLOROFORM	UG/L GC/MS	UG/L	1.000	<		
431A 00	002	32101	BROMODICHLOROMETHANE	UG/L GC/MS	UG/L	1.000	<			431A 00	002	32101	BROMODICHLOROMETHANE	UG/L GC/MS	UG/L	1.000	<		
431A 00	003	32105	DIBROMOCHLOROMETHANE	UG/L GC/MS	UG/L	1.000	<			431A 00	003	32105	DIBROMOCHLOROMETHANE	UG/L GC/MS	UG/L	1.000	<		
431A 00	004	32104	BROMOFORM	UG/L GC/MS	UG/L	1.000	<			431A 00	004	32104	BROMOFORM	UG/L GC/MS	UG/L	1.000	<		
431A 00	005	34423	METHYLENE CHLORIDE	UG/L GC/MS	UG/L	1.000	<			431A 00	005	34423	METHYLENE CHLORIDE	UG/L GC/MS	UG/L	1.000	<		
431A 00	006	34501	1,1-DICHLOROETHYLENE	UG/L GC/MS	UG/L	1.000	<			431A 00	006	34501	1,1-DICHLOROETHYLENE	UG/L GC/MS	UG/L	1.000	<		
431A 00	007	34496	1,1-DICHLOROETHYLENE	UG/L GC/MS	UG/L	1.000	<			431A 00	007	34496	1,1-DICHLOROETHYLENE	UG/L GC/MS	UG/L	1.000	<		
431A 00	008	34545	TRANS-1,2-DICHLOROETHYLENE	UG/L GC/MS	UG/L	1.000	<			431A 00	008	34545	TRANS-1,2-DICHLOROETHYLENE	UG/L GC/MS	UG/L	1.000	<		
431A 00	009	77279	1,2-DICHLOROETHANE	UG/L GC/MS	UG/L	1.000	<			431A 00	009	77279	1,2-DICHLOROETHANE	UG/L GC/MS	UG/L	1.000	<		
431A 00	010	34505	1,1,1-TRICHLOROETHANE	UG/L GC/MS	UG/L	1.000	<			431A 00	010	34505	1,1,1-TRICHLOROETHANE	UG/L GC/MS	UG/L	1.000	<		
431A 00	011	32102	CARBON TETRACHLORIDE	UG/L GC/MS	UG/L	1.000	<			431A 00	011	32102	CARBON TETRACHLORIDE	UG/L GC/MS	UG/L	1.000	<		
431A 00	012	39180	TRICHLOROETHYLENE	UG/L GC/MS	UG/L	1.000	<			431A 00	012	39180	TRICHLOROETHYLENE	UG/L GC/MS	UG/L	1.000	<		
431A 00	013	34475	TETRACHLOROETHYLENE	UG/L GC/MS	UG/L	1.000	<			431A 00	013	34475	TETRACHLOROETHYLENE	UG/L GC/MS	UG/L	1.000	<		
431A 00	014	34301	CHLOROBENZENE	UG/L GC/MS	UG/L	1.000	<			431A 00	014	34301	CHLOROBENZENE	UG/L GC/MS	UG/L	1.000	<		
431A 00	015	34716	DICHLOROBENZENE	UG/L GC/MS	UG/L	1.000	<			431A 00	015	34716	DICHLOROBENZENE	UG/L GC/MS	UG/L	1.000	<		
431A 00	016	78124	PETROLEUM	UG/L GC/MS	UG/L	1.000	<			431A 00	016	78124	PETROLEUM	UG/L GC/MS	UG/L	1.000	<		
431A 00	017	78131	TOLUENE	UG/L GC/MS	UG/L	1.000	<			431A 00	017	78131	TOLUENE	UG/L GC/MS	UG/L	1.000	<		
431A 00	018	78113	ETHYLBENZENE	UG/L GC/MS	UG/L	1.000	<			431A 00	018	78113	ETHYLBENZENE	UG/L GC/MS	UG/L	1.000	<		
431A 00	019	81551	XYLENE	UG/L GC/MS	UG/L	1.000	<			431A 00	019	81551	XYLENE	UG/L GC/MS	UG/L	1.000	<		
5001200	001	72037	PUMPING RATE	GPM	GAL/M	50.000	<			5001200	001	72037	PUMPING RATE	GPM	GAL/M	50.000	<		
5001200	004	00400	PH	PH UNITS	UNITS	6.800	<			5001200	004	00400	PH	PH UNITS	UNITS	6.800	<		
5001200	005	00010	WATER TEMPERATURE	DEG.C	DEG.C	14.400	<			5001200	005	00010	WATER TEMPERATURE	DEG.C	DEG.C	14.400	<		

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF PUBLIC WATER SUPPLIES
SELECTED SAMPLE EXPANDED REPORT

PAGE: 59
DATE: 03/07/91

REPORT: 00000004-
MODULE: 000000026

FACILITY: 1125735 PARK CITY SOUTH MHP
TAP: 01 IN THE PARK OFFICE BLDG
RAW SRCE: 45100 WELL #3, SW, IN LOT 210
STATUS: A PUBLIC: Y COMM: Y TYPE WATER: G
STATUS: A
STATUS: A
SAMPLE NO: 871774600 LOCATION: PARK CITY SOUTH MHP WELL 3
SMPL TYPE: RAW COLLECTOR: W. MCMILLAN
SMPL PURP: 5-SPEC/DTHR COMMENTS:
SMPL PRDG: 1-GWM THORG OBSRVATNS:

COLL DATE: 10/30/87 DELIVERED BY: UPS
LAB RCVD: 11/04/87 RECEIVED BY: PMO
LAB COMPL: 01/25/88 LAB SUPERVISOR: RPF
SMPL PERIOD: 10/87 FUND CODE: PW30

ANALYSIS		RESULT		UNITS		STANDARDS		TRIGGER	
NO	NO	NO	NO	NO	NO	RAW WTR	DRINK WTR	RAW WTR	LEVEL
102T000	001	70300	RESIDUE, TOTAL FILTERABLE @180 C, MG/L	MG/L	477.000				
103T000	001	00410	ALKALINITY, TOTAL MG/L AS CaCO3	MG/L	434.000				
107T000	001	00951	FLUORIDE, TOTAL MG/L AS F	MG/L	0.310	4.000			
108T000	001	00940	CHLORIDE, TOTAL MG/L AS CL	MG/L	19.000				
109T000	001	00945	SULFATE, TOTAL MG/L AS SO4	MG/L	17.000				
110T000	001	00630	NITRATE & NITRITE TOTAL MG/L AS N	MG/L	0.100 <	10.000			
111T000	001	00610	NITROGEN, AMMONIA TOTAL MG/L AS N	MG/L	1.500				
112T000	001	32730	PHENOLS, TOTAL RECOVERABLE UG/L	UG/L	5.000 <				
114T000	001	00956	SILICA, TOTAL MG/L AS SiO2	MG/L	15.000				
115T000	001	00665	PHOSPHORUS, TOTAL MG/L AS P	MG/L	0.130				
116T000	001	00720	CYANIDE, TOTAL MG/L AS CN	MG/L	0.005 <	0.200			
144T000	001	01002	ARSENIC, TOTAL RECOVERABLE UG/L AS AS	UG/L	6.000	50.000			
151T000	001	01051	LEAD, TOTAL RECOVERABLE UG/L AS PR	UG/L	12.000	50.000			
153T000	001	71990	MERCURY, TOTAL UG/L AS HG	UG/L	0.050 <	2.000			
155T000	001	01147	SELENIUM, TOTAL RECOVERABLE UG/L AS SE	UG/L	1.000 <	10.000			
177T100	001	00915	CALCIUM, TOTAL RECOVERABLE MG/L AS CA ANAL BY ICP	MG/L	93.000				
177T100	002	00927	MAGNESIUM, TOTAL RECOVERABLE MG/L AS CA ANAL BY ICP	MG/L	48.000				
177T100	003	00929	SODIUM, TOTAL RECOVERABLE MG/L AS NA ANAL BY ICP	MG/L	18.000				
177T100	004	00937	POTASSIUM, TOTAL RECOVERABLE MG/L AS K ANAL BY ICP	MG/L	0.990				
177T100	005	01105	ALUMINUM, TOTAL RECOVERABLE UG/L AS AL ANAL BY ICP	UG/L	50.000 <				
177T100	006	01007	ARIUM, TOTAL RECOVERABLE UG/L AS BA ANAL BY ICP	UG/L	164.000	1000.000			
177T100	007	01022	BORON, TOTAL RECOVERABLE UG/L AS B ANAL BY ICP	UG/L	126.000				
177T100	008	01012	BERYLLIUM, TOTAL RECOVERABLE UG/L AS BE ANAL BY ICP	UG/L	1.000 <				
177T100	009	01027	CADMIUM, TOTAL RECOVERABLE UG/L AS CD ANAL BY ICP	UG/L	3.000 <	10.000			
177T100	010	01034	CHROMIUM, TOTAL RECOVERABLE UG/L AS CR ANAL BY ICP	UG/L	5.000 <	50.000			
177T100	011	01042	COPPER, TOTAL RECOVERABLE UG/L AS CU ANAL BY ICP	UG/L	1445.000	5000.000			
177T100	012	01037	CORALT, TOTAL RECOVERABLE UG/L AS CO ANAL BY ICP	UG/L	5.000 <				
177T100	013	01045	IRON, TOTAL RECOVERABLE, UG/L AS FE ANAL BY ICP	UG/L	1907.000	1000.000*			
177T100	014	01055	MANGANESE, TOTAL RECOVERABLE UG/L AS MN ANAL BY ICP	UG/L	51.000	150.000			
177T100	015	01067	NICKEL, TOTAL RECOVERABLE UG/L AS NI ANAL BY ICP	UG/L	22.000				
177T100	016	01077	SILVER, TOTAL RECOVERABLE UG/L AS AG ANAL BY ICP	UG/L	3.000 <	50.000			
177T100	017	01082	STRONTIUM, TOTAL RECOVERABLE UG/L AS SR ANAL BY ICP	UG/L	1455.000				
177T100	018	01087	VANADIUM, TOTAL RECOVERABLE UG/L AS V ANAL BY ICP	UG/L	5.000 <				
177T100	019	01092	ZINC, TOTAL RECOVERABLE UG/L AS ZN ANAL BY ICP	UG/L	1177.000	5000.000			
177T100	020	82394	HARDNESS, CALC - MG/L	MG/L	429.000				
5001200	001	72037	PUMPING RATE GPM	GAL/M	50.000				
5001200	004	00420	PH PH UNITS	UNITS	7.400				
5001200	005	00010	WATER TEMPERATURE DEG C	DEG-C	15.200				

SAMPLE NO: 076057200 LOCATION: PARK CITY S MHP/WELL 3/BLOOMINGTON EAST COLL DATE: 10/30/87 DELIVERED BY: MAIL

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF PUBLIC WATER SUPPLIES
SELECTED SAMPLE EXPANDED REPORT

PAGE: 60
DATE: 03/07/91

REPORT: PWGMD245
MODULE: PWGMD026

*** CONTINUED ***

FACILITY: 1125785 PARK CITY SOUTH MHP										LAB RCVD: 11/04/87										RECEIVED BY: D V									
SMPL TYPE: RAW										COLLECTOR: MCHILLAN										LAB SUPERVISOR: JTH									
SMPL PURP: 5-SPEC/DTHR										COMMENTS: VOC'S										LAB COMPL: 12/30/87									
SMPL PRGS: V-VOC										OBSRVATNS: 2 VOC										SMPL PERIOD: 10/87									
FUND CODE: PW30																													
ANALYSIS										RESULT										UNITS									
ID										NO										NO									
DESCRIPTION										DRINK MTR										RAW MTR									
TRIGGER										LEVEL																			
STANDARD										7.000										5.000									
5.000										5.000										5.000									
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APPENDIX E



- ARSENIC - CHEMICAL INFORMATION SHEET*

WHAT IS ARSENIC?

Arsenic is a shiny, gray, naturally occurring element often referred to as a metal although chemically classified as a metalloid. Arsenic is usually combined with one or more other elements to form inorganic (trivalent or pentavalent) or organic arsenic.

The major current uses of arsenic are in pesticides, cotton drying agents, and wood preservatives. Arsenic has several minor uses, primarily as an additive in metal alloys to increase their hardness and heat resistance; as a growth promoter added to swine and poultry feed; as a bronzing and decolorizing agent in glass production; as an antiparasitic drug; and in the manufacture of electrical semiconductors. Approximately 90 percent of the arsenic produced in the United States in 1979 was used in either the production of pesticides (70%) or wood preservatives (20%). USEPA has proposed cancellation or restriction of these two uses of arsenic.

WHAT IS THE OCCURRENCE OF ARSENIC IN THE ENVIRONMENT?

Arsenic ranks twentieth among the elements in abundance in the earth's crust and is widely distributed in the environment being detected in air, soil, water, plants, animals, and foods. Arsenic enters the environment both as the result of natural forces (volcanic emissions and weathering of arsenic-containing rocks) and human activity. The three largest artificial sources of arsenic emissions to the air and soil are fossil fuel combustion, pesticide use, and copper smelting. In surface waters, the largest artificial sources of arsenic are from urban runoff, pesticide application, and zinc production.

Arsenic is present in all soils with the content in virgin soils ranging from 0.1 to 40 ppm (parts per million). The amount of arsenic in soil depends on inputs from mineral weathering processes, atmospheric deposition, and residue from pesticide application. The natural concentration of arsenic in groundwater is dependent on the arsenic content of the bedrock. Arsenic is found in some bottled mineral waters and in many foods; it occurs naturally in seafoods such as shrimp, lobster, crabs, and clams at levels of 25 to 80 ppm. Arsenic is also introduced into foods by way of pesticides and animal feeds. Arsenic is found in cigarette smoke where it originates from the use of insecticides on tobacco. Concentrations in tobacco have declined during the last twenty years due to decreased use of arsenical pesticides. Plants may accumulate arsenic via root uptake from soil depending upon the plant species, soil arsenic concentration, and soil characteristics.

Arsenic released to the atmosphere is eventually transported to soils or surface waters. Airborne arsenic deposited on soils may then move either into groundwater or surface water, and the arsenic passing into surface waters may settle into sediments. The annual environmental burden of arsenic indicates that approximately 90 percent of arsenic is deposited on land, with the atmosphere accounting for eight percent and the smallest quantity deposited in surface waters.

WHAT ARE THE HEALTH EFFECTS ASSOCIATED WITH ARSENIC EXPOSURE?

The medicinal use of arsenic, although practiced for hundreds of years, apparently reached a peak in the 1800's. Fowler's solution, containing arsenic trioxide, was prescribed for symptomatic relief of acute infections, epilepsy, asthma, and skin

rashes. Thus, many patients received arsenic for periods of months and years and it was in such patients that the consequences of long-term exposure to arsenic were first recognized.

The amount of arsenic capable of causing harmful effects depends on its chemical form. Elemental arsenic has a low toxicity which is attributed to its insolubility in water and body fluids. In general, organic forms like those found in some seafood are less toxic than the inorganic forms (trivalent or pentavalent) which are the principal forms present in air and water. There are several studies on animals which indicate that low levels of arsenic in the diet are beneficial or essential.

Short-term exposure -- Serious health effects may occur as the result of single or short-term inhalation or ingestion of large amounts of arsenic. The symptoms that may follow ingestion of arsenic consist of gastrointestinal disturbances, which can be severe enough to cause cardiovascular effects, shock, and death. Arsenic may also have toxic effects on the liver, blood-forming organs, central nervous system, peripheral nervous system and the cardiovascular system. Ingestion of arsenic may result in skin diseases and darkening of the skin color. Typical signs of arsenic toxicity (gastrointestinal irritation, skin changes, etc.) have been reported in several population's drinking water with 0.4 ppm of arsenic or more. Inhalation of arsenic can cause irritation of the upper respiratory tract (nose, throat, etc.) at air concentrations of around 100 micrograms per cubic meter.

Long-term exposure -- The most characteristic effect of ingestion of inorganic arsenic is skin abnormalities including hyperpigmentation and the appearance of small "corns" on the palms, soles, and trunk. While these skin changes are not considered significant health problems themselves, a small number of these may progress to skin cancer. Arsenic ingestion has also been reported to increase the risk of cancer in the liver, bladder, kidney, and lungs. The relationship of ingestion of arsenic with skin cancer and inhalation of arsenic-containing particulates with lung cancer establishes arsenic as a human carcinogen. However, in contrast to most other human carcinogens, it has been difficult to confirm in experimental animals.

Injections of a particular arsenic compound into pregnant animals have caused specific birth defects in hamsters, rats, and mice. At the present time there is no evidence of arsenic-related birth defects in humans. However, animals and humans who have been exposed to sodium arsenite have shown chromosomal defects (gene damage).

HOW IS ARSENIC REGULATED?

There are a number of regulations controlling arsenic exposure to workers, consumers, and the environment. Threshold Limit Values (TLVs) adopted by the American Conference of Governmental Industrial Hygienists refer to airborne concentrations of substances and represent conditions under which it is believed that nearly all healthy workers may be repeatedly exposed day after day without adverse effects. The TLV for arsenic is 0.2 milligrams per cubic meter as an average eight hour exposure limit for a 5-day workweek. The USEPA, under the Clean Air Act, lists arsenic as a hazardous air pollutant.

A Maximum Contaminant Level (MCL) of 50 parts per billion (ppb) of arsenic in drinking water has been established under the Safe Drinking Water Act. In addition, the ambient water quality criterion for arsenic under the Clean Water Act is 2.2×10^{-3} ug/l (ppb) based on the risk to human health from the consumption of contaminated water and fish.

CAS:jas/1466j,1-2/sp

*Note: This information sheet is a summary of readily available data regarding the general nature and effects of this chemical. The reader is encouraged to consult other sources or an appropriate professional if a more detailed explanation for specific concerns is desired.



Illinois
Environmental
Protection Agency

Office of Chemical Safety
2200 Churchill Road, P.O. Box 19276
Springfield, Illinois 62794-9276

IEPA/ENV/87-001-7

April, 1987

- Lead - Chemical Information Sheet*

WHAT IS LEAD?

Lead is a substance which can occur by itself as an element or in combinations with other ions. Some combinations of lead which have toxic effects are lead acetate and tetraethyl lead which is used in gasoline. Lead, the element, is a soft bluish or silvery grey heavy metal. In 1976, approximately 1.49 million tons of lead were produced in the U.S. Lead is also a by-product of fluorspar mining and Illinois is third in the nation for production of lead in this manner. Fifty-four percent of the lead produced in this country is used in batteries. Other uses of lead include metal products such as solders, bearings, printed type, and brasses; gasoline antiknock additives; and ceramics, inks, paints, and varnishes.

WHAT IS THE OCCURRENCE OF LEAD IN THE ENVIRONMENT?

Lead is widespread in the environment. It is present naturally in most soils and can occur in concentrated deposits. The use of lead dates from the earliest civilizations of man. Lead coins and medallions have been recovered from ancient Egyptian ruins, and lead water pipes were used in ancient Rome. These uses and more recent uses in this century have increased the lead levels in air, rain, snowfall, surface water, and soil, distributing lead widely with high concentrations in some urban areas.

Recently, lead in drinking water has become a concern. Lead rarely occurs naturally at high levels in drinking water sources. The major sources of lead in drinking water are pipes and soldered pipe joints containing lead. The corrosive action of water on distribution systems and residential plumbing systems causes the lead to dissolve from materials in these systems and enter the water.

The most common source of lead exposure for humans is through food, but it is usually environmental sources that result in exposures to lead in concentrations which can produce toxic effects. These sources include lead-based paint in old dwellings, lead in air and soil from combustion of lead-containing auto fuels or industrial emissions, and lead dissolving from pottery which has not been properly glazed. Lead is generally found in higher concentrations in urban environments than in rural.

WHAT ARE THE HEALTH EFFECTS OF LEAD EXPOSURE?

Adults tend to be less susceptible to lead poisoning than children and their exposure is usually limited to dust and fumes while at work. However, lead poisoning in adults can be serious if left untreated. Symptoms include loss of appetite, weight loss, insomnia, headache, and abdominal, muscle, or joint pain. If exposure has not been excessive or prolonged, these symptoms may

disappear when exposure ceases. Prolonged exposure to lead can cause permanent nerve damage leading to a condition known as "wrist drop", an inability to extend the hand. Lead has also been known to affect reproduction and cause elevated blood pressure.

Children, particularly those under the age of two, and developing fetuses, are most seriously threatened by lead. In this age group, lead may cause permanent damage to the developing nervous system leading to subtle learning, behavioral or psychological problems, or with higher exposures, to mental retardation. Children with pica, an abnormal tendency to chew on or eat non-food materials (such as paint chips, toys, and dirt), may be especially at risk for lead poisoning. Children with nutritional problems, such as iron or calcium deficiencies, may have enhanced lead absorption and more adverse health effects from lead. Some other effects of lead observed in both children and adults are anemia, damage to the kidneys, and digestive problems.

Laboratory tests have shown that some lead compounds (lead acetate and lead subacetate) can induce cancer in kidneys of rodents fed very high doses of lead. On the other hand, the evidence that lead causes cancer in humans is very limited. A study of lead workers in the U.S. showed an increase in deaths from cancer, but the significance of these findings have been debated. The most common tumors found were of the respiratory and digestive systems. US EPA considers the evidence sufficient to consider lead acetate and lead subacetate as probable human carcinogens.

HOW IS LEAD REGULATED?

Threshold limit values adopted by the American Conference of Governmental Industrial Hygienists refer to airborne concentrations of substances and represent conditions under which it is believed that nearly all healthy workers may be repeatedly exposed day after day without adverse effect. The threshold limit value for lead is 0.15 mg/m^3 as an average eight hour exposure limit for a 5-day work week. The current drinking water standard is 50 micrograms of lead per liter of water and US EPA is considering lowering this level to 20 micrograms. The Safe Drinking Water Act Amendments of 1986 ban the use of lead pipe with more than 8 percent lead and solder and also ban flux with more than 0.2 percent lead in new plumbing or repairs to plumbing that supply drinking water. The Consumer Products Safety Commission has set a level of 0.06 percent lead in household paints and proposes to assess the use of lead in printing inks. As a result of auto emission controls under the Clean Air Act Amendments of 1970, the use of lead additives in gasoline is being phased out in an effort to reduce lead in the environment. US EPA estimates that 50 percent of the gasoline produced and used in this country is now lead-free.

TEV:st:2295g,spl-2

* Note: This information sheet is a summary of readily available data regarding the general nature and effects of this chemical. The reader is encouraged to consult other sources or an appropriate professional if a more detailed explanation for specific concerns is desired.

APPENDIX F



Illinois
Environmental
Protection Agency

Office of Chemical Safety
2200 Churchill Road, P.O. Box 19276
Springfield, Illinois 62794-9276

IEPA/ENV/87-001-6

April, 1987

- GLOSSARY - CHEMICAL INFORMATION SHEET

absorption - the movement of a chemical into the bloodstream or other body fluid or tissue after its entrance into the body through the skin, lungs, or gastrointestinal tract.

acute - sharp, severe; having a relatively rapid onset, often with severe symptoms and a relatively short course. In toxicology refers to a single large exposure to a chemical (acute exposure), or to the development of symptoms of poisoning soon after a single exposure to a substance (acute toxicity).

ACGIH - the American Conference of Governmental Industrial Hygienists. It recommends upper limits (see TLV) for exposure to workplace chemicals.

bioconcentration - the process in and by which chemical substances are accumulated in living organisms above their concentration in the environment. For example, a chemical is spilled into a river or lake and is ingested and stored by small organisms like plankton; small fish eat the plankton; and large fish eat the smaller fish. As this process occurs, the chemical becomes thousands of times more concentrated in the tissues of the large fish than in the plankton or the water. Usually occurs with fat-soluble compounds rather than water-soluble compounds.

biodegradation - the breaking down of an organic substance, resulting from the complex action of living organisms.

cancer - a group of diseases characterized by malignant, uncontrolled growth of cells of body tissue (tumors).

carcinogen - a term applied generally to any substance that is capable of producing cancer or increasing the growth and spreading of tumors in an organism.

chronic - occurring over a period of time. In toxicology refers to repeated exposure (chronic exposure) to a chemical for a relatively long period of time or persistence of symptoms or disease over a long period of time (chronic toxicity).

epidemiology - the study of the incidence, distribution, and control of disease in human populations.

leaching - downward movement of a material in solution through soil.

Maximum Contaminant Level (MCL) - the maximum permissible level of a contaminant that is allowed in a public water supply system.

metabolism - the changes that a chemical undergoes in an organism. The products of metabolism may be more or less active in the organism than the original (parent) compound. In animals, many of these products find their way to body excretions, for example through lung exhalation, urine, or feces. Tracing the pathways of metabolism is important to shed light on possible relationships between chemicals and particular health effects.

mg/m³ - means milligrams of a chemical in a cubic meter of air. It is a density measurement expressing the amount of air pollutant in a given volume of air.

mutagen - a substance that causes a change in the genetic material in a body cell, called a mutation. Mutations may lead to birth defects, miscarriages, or cancer, or they may have no obvious effect, depending on what genetic material is damaged and on where the damage occurs.

persistent - existing for a long time in the environment or the body. For chemicals, this means not easily broken down; for the effects of chemicals, this means the effect remains or recurs long after exposure to the chemical.

pesticide - a general term used to describe a product designed to kill or control unwanted organisms; for example, herbicides are designed to control unwanted plants, insecticides are designed to control unwanted insects, fungicides are designed to control fungus and mold, etc.

ppb - an expression describing a small concentration, equal to an amount of one substance in a billion parts of another material; for example, one drop of alcohol in 16,000 gallons of water.

ppm - an expression describing a small concentration, equal to an amount of one substance in a million parts of another material; for example, one drop of alcohol in 16 gallons of water.

solvent - a liquid substance capable of dissolving or dispersing one or more other substances.

teratogen - a substance that causes stillbirths, birth defects, or malformations by affecting the growing fetus.

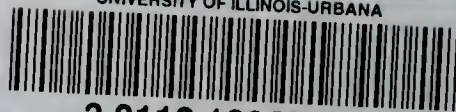
TLV - is the Threshold Limit Value for air. The TLV is a workplace exposure limit recommended by ACGIH and represents conditions under which it is believed that nearly all workers may be repeatedly exposed to a substance day after day without adverse effect.

toxicology - the study of the adverse effects of chemicals on living organisms.

volatile - readily vaporizable at a relatively low temperature.

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